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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,216	09/16/2003	Moshe Levy	P-3263CNT3	3357

7590	03/13/2007

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EXAMINER
DOAN, TRANG T

ART UNIT	PAPER NUMBER
2131	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/664,216	LEVY ET AL.
	Examiner	Art Unit	
	Trang Doan	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *12 January 2006*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1 and 24-57* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1 and 24-57* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *16 September 2003* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 2-23 are canceled. Claims 1 and 24-57 are pending in this application.

Claim Objections

2.   Regarding claim 44, the Examiner interprets the limitation "determinine", in line 8

page 10, as "determining". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claim 31 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the enablement requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention.

The limitation "a small footprint device" is not supported in the specification.

Double Patenting

5.   A rejection based on double patenting of the "same invention" type finds its
support in the language of 35 U.S.C. 101 which states that "whoever invents or
discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis
added). Thus, the term "same invention," in this context, means an invention drawn to
identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re
Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164
USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer <u>cannot</u> overcome a double patenting rejection based upon 35 U.S.C. 101.

6.   Claim 1 of the instant application is rejected under 35 U.S.C. 101 as claiming the

same invention as that of claim 1 of prior U.S. Patents No. 6092147. This is a double

patenting rejection.

7.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8.   Claims 1 and 24-57 are rejected on the ground of nonstatutory obviousness-type

double patenting as being unpatentable over claims 1-42 of U.S. Patent No. 6640279.

Although the conflicting claims are not identical, they are not patentably distinct from

each other because claims 1-42 of the patented application and claims 1 and 24-57 of

the instant application are functionally equivalent.

9.   The following table shows the complete mapping of the independent claims

between the instant application and the patented application.

Instant Application 10/664216	**Patented Application 6640279**
(1, 48). A system for executing a software application comprising a plurality of hardware independent bytecodes, the system comprising: a computing system that **generates bytecodes**; a virtual machine, remote to the computing system, comprising means for **receiving a plurality of bytecodes from said computing system**, and means for executing said plurality of bytecodes; means for testing said bytecodes against a set of predetermined criteria; and means for securely distributing said testing means between said virtual machine and said computing system so that the **bytecode** verification completed by the computing system is **authenticated by the virtual machine prior to the execution of the bytecodes by said virtual machine.**	(1). A system for executing a software application comprising a plurality of hardware independent bytecodes, the system comprising: a computing system that **generates bytecodes**; a virtual machine remote to the computing system, said virtual machine configured to **receive a plurality of authenticated bytecodes from said computing system** and to execute said plurality of authenticated bytecodes; means for testing said bytecodes against a set of predetermined criteria; and means for securely distributing said testing means between said virtual machine and said computing system so that **bytecode** testing completed by said computing system is **authenticated by said virtual machine prior to the execution of said authenticated bytecodes by said virtual machine.**
(24). A method for controlling a device having an external port and a microcontroller configured to run a virtual machine, the method comprising: **receiving through the port**, code including virtual machine code for use by the virtual machine; **determining whether the code is authentic** in response to an indicator of authenticity provided within the code; and **if the code is determined to be authentic**, then omitting processing of particular code provided within the received code according to at least some of a predetermined set of processes, and executing the particular code, if the received code is determined to be	(7). An apparatus for controlling a device having an external port and a microcontroller configured to execute a virtual machine, the apparatus comprising: means for **receiving through the external port**, code including virtual machine code for use by said virtual machine; means for **determining whether said code is authentic** in response to an indicator of authenticity provided within said code; and means for, **if said code is determined to be authentic**, omitting verification that said virtual machine code conforms to at least some of a predetermined set of criteria, and operating said virtual machine according

authentic.	to said virtual machine code.
(27). An apparatus for controlling a device having an external port and a microcontroller configured to run a virtual machine, the apparatus comprising: means for **receiving through the port**, code including virtual machine code for use by the virtual machine; means for **determining whether the code is authentic** in response to an indicator of authenticity provided within the code; and means for, **if the code is determined to be authentic**, omitting processing of particular code provided within the received code according to at least some of a predetermined set of processes, and executing the particular code, if the received code is determined to be authentic.	(7). An apparatus for controlling a device having an external port and a microcontroller configured to execute a virtual machine, the apparatus comprising: means for **receiving through the external port**, code including virtual machine code for use by said virtual machine; means for **determining whether said code is authentic** in response to an indicator of authenticity provided within said code; and means for, **if said code is determined to be authentic**, omitting verification that said virtual machine code conforms to at least some of a predetermined set of criteria, and operating said virtual machine according to said virtual machine code.
(30). An apparatus for programming a device having a microcontroller configured to execute a virtual machine and a port to a communications link from a remote computer connected to the communications link, the apparatus comprising: means for **verifying** at said remote computer that particular virtual machine code for use by said virtual machine conforms to at least some of a predetermined set of criteria; means for, **if said particular virtual machine code passes said verifying**, generating at least one indicator of authenticity, and sending code including said particular virtual machine code and said at least **one indicator of authenticity from said remote computer** to said device over said communications link; means for receiving said code through said port at said device; means for **determining at the device whether said code is authentic** in response to the at least one	(28). An apparatus for programming a device having a microcontroller configured to execute a virtual machine and a port to a communications link from a remote computer connected to the communications link, the apparatus comprising: means for **verifying** at said remote computer that particular virtual machine code for use by said virtual machine conforms to at least some of a predetermined set of criteria; **if said particular virtual machine code passes said verifying**, then means for generating at least **one indicator of authenticity**, and means for sending code including said particular virtual machine code and said at least one indicator of authenticity from said remote computer to said device over said communications link; means for receiving said code through said port at said device; means for **determining at the device whether said code is authentic**

indicator of authenticity; and means for, if said code is determined to be authentic, omitting verification that said particular virtual machine code **conforms to said at least same of the predetermined set of criteria**, and operating the virtual machine according to said particular virtual machine code.	in response to the at least one indicator of authenticity; and means for, if said code is determined to be authentic, omitting verification that said particular virtual machine code **conforms to said at least same of the predetermined set of criteria**, and operating the virtual machine according to said particular virtual machine code.
(40). A memory for storing data for access by an application program being executed on a data processing system, comprising: a **data structure stored in said memory**, said data structure including information used by said program to control a device having an external port and a microcontroller **configured to execute a virtual machine**, said data structure comprising a proof of authenticity and code received through the port, said code including virtual machine code for use by the virtual machine, said **proof of authenticity for determining whether to omit** processing of particular code provided within the received code according to at least some of a predetermined set of processes prior to executing the particular code.	(39). A memory for storing data for access by an application program being executed on a data processing system, comprising: a **data structure stored in said memory**, said data structure including information used by said program to control a device having an external port and a microcontroller **configured to execute a virtual machine**, said data structure comprising one or more verified bytecodes and a proof of authenticity, said **proof of authenticity for determining** whether to verify said one or more bytecodes conform to at least some of a predetermined set of criteria prior to operating said device in response to said verified bytecodes.
(44). A computer program product for a programmable device having a microcontroller and an external port, the computer program product comprising: a memory medium; instructions, stored on the memory medium, to cause the microcontroller to **receive an authenticated bytecode** by a virtual machine, said **authenticated bytecode being previously compared against a predetermined set of criteria** and having a proof of authenticity; determining whether said authenticated bytecode is corrupted based at least in part on said proof of authenticity; and	(4, 5). A method for executing a software application on a virtual machine, the application comprising a plurality of bytecodes, comprising: **receiving an authenticated bytecode** by a virtual machine, said **authenticated bytecode being previously compared against a predetermined set of criteria** and having a proof of authenticity; determining whether said authenticated bytecode is corrupted based at least in part on said proof of authenticity; and executing said bytecode.

execute said bytecode.	
(54). A method for executing a software application comprising a plurality of bytecodes, the method comprising: a computer system **verifying that a bytecode** conforms to a predetermined set of criteria to generate a verified bytecode, and **generating an authenticated bytecode** from said verified bytecode; and a virtual machine, remote from said computer system, receiving said authenticated bytecodes, **determining whether the authenticated bytecodes are corrupted**, and executing said authenticated bytecodes if said authenticated bytecodes are not corrupted.	(3). A system for executing a software application comprising a plurality of bytecodes, the system comprising: a computer system configured to **verify that a bytecode** conforms to a predetermined set of criteria to generate a verified bytecode, said computer system further configured to **generate an authenticated bytecode** from said verified bytecode; and a virtual machine remote from said computer system and for executing said authenticated bytecodes, said virtual machine configured to receive said authenticated bytecodes, **determine whether said authenticated bytecodes are corrupted** and execute said authenticated bytecodes.

10.   Claims 24-57 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6092147. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-23 of the patented application and claims 24-57 of the instant application are functionally equivalent.

11.   The following table shows the complete mapping of the independent claims between the instant application and the patented application.

Instant Application 10/664216	**Patented Application 6092147**
(44). A computer program product for a programmable device having a microcontroller and an external port, the computer program product comprising: a memory medium; instructions, stored on	(1). A system for executing a software application comprising a plurality of hardware independent bytecodes, the system comprising: a computing system data **generates**

the memory medium, to cause the microcontroller to **receive an authenticated bytecode** by a virtual machine, said **authenticated bytecode being previously compared against a predetermined set of criteria** and having a proof of authenticity; determining whether said authenticated bytecode is corrupted based at least in part on said proof of authenticity; and **execute** said bytecode.	**bytecodes**; a virtual machine, remote to the computing system, comprising means for **receiving a plurality of authenticated bytecodes from said computing system**, and means for executing said plurality of authenticated bytecodes; means for testing said bytecodes against a set of predetermined criteria; and means for securely distributing said testing means between said virtual machine and said computing system so that **bytecode** testing completed by the computing system is **authenticated by the virtual machine prior to the execution of the authenticated bytecodes by said virtual machine.**
(40). A memory for storing data for access by an application program being executed on a data processing system, comprising: a **data structure stored in said memory**, said data structure including information used by said program to control a device having an external port and a microcontroller **configured to execute a virtual machine**, said data structure comprising a proof of authenticity and code received through the port, said code including virtual machine code for use by the virtual machine, said **proof of authenticity for determining whether to omit** processing of particular code provided within the received code according to at least some of a predetermined set of processes prior to executing the particular code.	(7). A virtual machine for executing a software application comprising a plurality of bytecodes, the virtual machine being executed by a hardware processor, the virtual machine comprising: means for **receiving an authenticated bytecode**, the authenticated bytecode being previously compared against a predetermined set of criteria and having a proof of authenticity; means for **determining that the authenticated bytecode is not corrupted based on the proof of authenticity**; and means for executing said bytecode.
(44). A computer program product for a programmable device having a microcontroller and an external port, the computer program product comprising: a memory medium; instructions, stored on the memory medium, to cause the microcontroller to **receive an authenticated bytecode** by a virtual machine, said **authenticated bytecode**	(11). A system for executing a software application comprising a plurality of bytecodes, the system comprising: a computer system comprising means for verifying that a bytecode conforms to a **predetermined set of criteria to generate a verified bytecode**, and means for generating an authenticated bytecode from said verified bytecode; and

being previously compared against a predetermined set of criteria and having a proof of authenticity; determining whether said authenticated bytecode is corrupted based at least in part on said proof of authenticity; and execute said bytecode.	a virtual machine, remote from said computer system, for executing said authenticated bytecodes, said virtual machine comprising means for receiving said authenticated bytecodes, means for determining that the authenticated bytecodes are not corrupted, and means for executing said authenticated bytecodes.
(44). A computer program product for a programmable device having a microcontroller and an external port, the computer program product comprising: a memory medium; instructions, stored on the memory medium, to cause the microcontroller to receive an authenticated bytecode by a virtual machine, said authenticated bytecode being previously compared against a predetermined set of criteria and having a proof of authenticity; determining whether said authenticated bytecode is corrupted based at least in part on said proof of authenticity; and execute said bytecode.	(15). A smart card having a plastic card having a microcontroller embedded therein, the smart card comprising: a virtual machine being executed by a microcontroller, the virtual machine executing a software application comprising a plurality of previously verified bytecodes, the virtual machine comprising means for receiving an authenticated bytecode, the authenticated bytecode being previously compared against a predetermined set of criteria and having a proof of authenticity, means for determining that the authenticated bytecode is not corrupted based on the proof of authenticity, and means for executing said bytecode.
(44). A computer program product for a programmable device having a microcontroller and an external port, the computer program product comprising: a memory medium; instructions, stored on the memory medium, to cause the microcontroller to receive an authenticated bytecode by a virtual machine, said authenticated bytecode being previously compared against a predetermined set of criteria and having a proof of authenticity; determining whether said authenticated bytecode is corrupted based at least in part on said proof of authenticity; and execute said bytecode.	(18, 22). A method for executing a software application on a virtual machine, the application comprising a plurality of bytecodes, comprising: receiving an authenticated bytecode by a virtual machine, the authenticated bytecode being previously compared against a predetermined set of criteria and having a proof of authenticity; determining that the authenticated bytecode is not corrupted based on the proof of authenticity; and executing said bytecode.

Reason for allowance

12.   The following is an examiner's statement of reasons for allowance:

Claims 1 and 24-57 which are allowable over the prior art of record because

none of the prior art of record teaches or fairly suggests a virtual machine for executing

a software application comprising a plurality of bytecodes, the virtual machine being

executed by a hardware processor, the virtual machine configured to: receiving an

authenticated bytecode, the authenticated bytecode being previously compared against

a predetermined set of criteria and having a proof of authenticity; determine whether the

authenticated bytecode is corrupted based at least in part on the proof of authenticity;

and execute the bytecode.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Trang Doan whose telephone number is (571) 272-
0740. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for
the organization where this application or proceeding is assigned is 571-273-8300.

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Patent Application Information Retrieval (PAIR) system. Status information for
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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Trang Doan
Examiner
Art Unit 2131

T.D.
03/02/2007

CHRISTOPHER REVAK
PRIMARY EXAMINER